

REMARKS / ARGUMENTS

In complete response to the outstanding Official Action of February 25, 2004, on the above-identified application, reconsideration is respectfully requested.

Claims 1-10, 12-15, and 17-25 remain in this application. Claims 11 and 16 have been cancelled. Claims 1, 12, 15 and 18 have been amended.

Claims 1, 12, 15, and 18 have been amended to further define the invention. In order to advance prosecution, and with traverse, the term "eliminating ionic impurities from said anion exchange resin" has been removed from claims 1, 15, and 18. The element "converting said ion exchange resin into the bicarbonate form" has been amended to now read "thus forming an ion exchange resin in the bicarbonate form", in order to better define the invention. Claim 12 has been amended to correct a claim reference.

The term "in the absence of calcium carbonate" has been added to the preambles of claims 1, 15, and 18. Support for these amendments may be found throughout the Specification.

In *Ex Parte Parks*, 30 USPQ2d 1234, 1236 (Bd. Pat. App. & Inter. 1993), which is cited in the M.P.E.P., Section 2173.05(i) with reference to negative limitations, it is noted that the negative limitation need not have a literal basis in the Specification. Furthermore, it is stated that "it is sufficient if the originally-filed disclosure would have conveyed to one having ordinary skill in the art that an appellant had possession of the concept that is claimed." (first full paragraph of the OPINION section). The Board, in *Ex Parte Parks*, noted how the discussion in the Disclosure "would seem to cry out for a catalyst if one were used, no mention is made of a catalyst". (fourth full paragraph of the OPINION section).

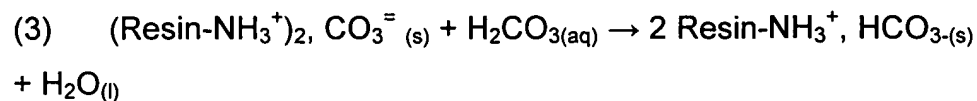
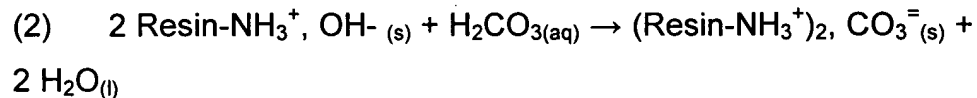
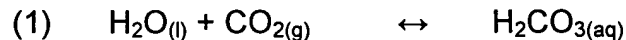
In the instant application, it is clearly stated in the Description of Related Art section of the Disclosure, that:

"There are, however, various problems associated with the use of exchange resins to remove ionic impurities from an aqueous hydrogen peroxide solution. For example, through the use of sodium bicarbonate or ammonium bicarbonate solutions in preconditioning the anionic exchange resins, a significant amount of sodium remains on the treated resin." (Page 2, Lines 21 through 25).

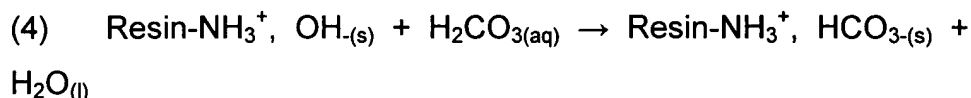
Further support can be found, for example, on Page 5, Line 17 through Page 6, Line 10):

"It has now been found that anionic exchange resins can effectively be converted from hydroxide form to bicarbonate form by contacting the resins with carbon dioxide."

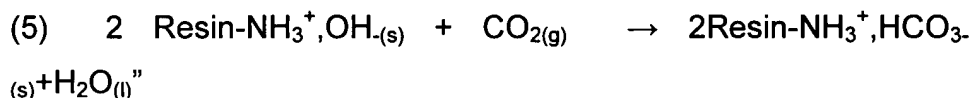
The chemical reactions for conditioning the resin with carbon dioxide in water are as follows:



The net overall chemical reaction for reaction is shown in equation (4).



In the case of preconditioning the resin in dry form with carbon dioxide, the chemical reaction is as follows:



These reaction equations clearly indicate that carbon dioxide, and only carbon dioxide, is the desired reactant from which the bicarbonate is to be formed.

Further support for this amendment may be found in the Specification (Page 6, Lines 14 through 18):

"In such a case, the resin to be preconditioned is introduced into a column and carbon dioxide gas is passed through the resin preferably in an upflow direction. In this manner, the resin can be converted from a hydroxide form to a bicarbonate form. Preferably, the conversion to bicarbonate is in excess of 99 percent."

Herein it is clearly evident that it is solely carbon dioxide gas that converts the resin to bicarbonate form. And furthermore, the remark that the conversion should preferably exceed 99% clearly indicates that any other reactants or reactions would be considered contamination.

In light of the discussion in Ex Parte Parks, it is clear from the above-cited references, that any ionic residue that would remain on the resin after treatment would be undesirable. This invention is disclosed and enabled with the resin being pretreated solely with carbon dioxide. The reaction equations solely indicate that carbon dioxide is the only desired reactant. This is especially true with regard to any additional ionic chemicals that would leave undesirable ionic residues on the resin. Therefore, it would be clear to one of ordinary skill in the art, that the Applicants had possession of the concept of what is now being claimed.

Allowable Subject Matter:

Applicants gratefully acknowledge the indication in the second paragraph of page 4 that Claims 18–25 are free of the prior art.

Claim Rejections Under 35 U.S.C. § 112:

Claims 1-10, 12-15, and 17-25 stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor (s), at the time the application was filed, had possession of the claimed invention. In the interest of advancing the prosecution of this application, Applicants have amended claims 1, 15, and 18, with traverse, to delete the step of “eliminating ionic impurities from said anion exchange resin”. This renders these rejections moot.

Claims 1-10, 12-15, and 17-25 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner notes that it is “indefinite as to whether the claims require that the conversion of

the anion exchange resin into the bicarbonate form is required to take place after steps (a) – (d) as recited in claims 1, 15, and 18. Applicants have amended claims 1, 15, and 18 to more clearly indicate the causal relationship between the passing of the ultra-high purity carbon dioxide gas through the anion exchange bed, and the resulting bicarbonate form of the resin. This renders these rejections moot.

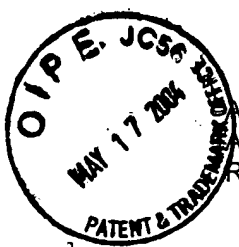
Claim Rejections Under 35 U.S.C. § 103:

Claims 1 and 15 stand rejected under 35 U.S.C. § 102 (b) as anticipated by or, in the alternative, under 35 U.S.C. § 103 (a) as being obvious over Holl et al. '922, for reasons given in the last Office Action. Amendments made to claims 1 and 15 render these rejections moot.

The Examiner notes that the arguments that Applicants submitted in Paper 5, were not convincing, “since applicant’s claims do not exclude the use of carbon dioxide in combination with calcium carbonate to treat the resin.” Applicants have amended Claims 1, 15, and 18, in order to address the Examiner’s comments.

Claims 2-10, 12-14 and 17 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over Holl et al. '922, for reasons given in the last Office Action. Applicants respectfully maintain that the present invention is patentable over Holl et al. '922.

Applicants respectfully argue that since independent Claims 1 and 15, as currently amended, are allowable over Holl et al. '922 for the reasons enumerated above, Claims 2-14 and 17 are also allowable since they are dependent claims.



Application No. 09/824,741
Amendment dated May 14, 2004
Reply to Office Action of February 25, 2004

CONCLUSION

In view of the current amendments, the present application now stands in condition for allowance. Early notice to this effect is earnestly solicited.

Should the Examiner believe that a telephone call would expedite prosecution of this application, he is invited to call the undersigned attorney at the number listed below.

Respectfully submitted,

Elwood L. Haynes

Registration No. 55,254

Date: May 14, 2004
Air Liquide
2700 Post Oak Blvd., Suite 1800
Houston, Texas 77056
(713) 624-8956 Phone
(713) 624-8950 Fax

CERTIFICATE OF MAILING UNDER 37 CFR 1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 14th day of May, 2004.

Stacy Forte